

1 1. An apparatus for filtering out selected key codes transmitted between a keyboard and a
2 host computer, the apparatus comprising:

3 an input port configured to receive a stream of key codes transmitted from a
4 keyboard;

5 a filtering module, operably connected with the input port, the filtering module
6 configured to block selected key codes and combinations of key codes of the stream of
7 key codes; and

8 an output port, operably connected with the filtering module, the output port
9 configured to pass the unblocked key codes to a host computer.
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11 2. The apparatus of claim 1, wherein the filtering module is implemented independent of
12 the keyboard and the host computer.
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14 3. The apparatus of claim 1, wherein the filtering module further comprises a processor
15 configured to execute computer code for blocking the selected key codes and
16 combinations of key codes.
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18 4. The apparatus of claim 3, wherein the filtering module further comprises a memory
19 device connected to the processor for storing the computer code.
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21 5. The apparatus of claim 1, wherein the key codes comprise make key codes
22 corresponding to keys that are pressed, and release key codes corresponding to keys that
23 are released, and wherein each key on the keyboard is characterized by a unique make key
24 code and a unique release key code.
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- 1 6. The apparatus of claim 1, wherein the filtering module further comprises:
2 a rules table containing key codes and rules associated with each key code, each
3 rule determining whether a key code is to be blocked or transmitted;
4 a make list containing a list of make key codes that have been received and
5 transmitted to the host computer and for which corresponding release key codes have not
6 been received; and
7 a block list containing a list of make key codes that have been received and
8 blocked from the host computer and for which corresponding release key codes have not
9 been received.
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- 11 7. The apparatus of claim 1, wherein the filtering module comprises a microcontroller.
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- 13 8. The apparatus of claim 7, wherein the microcontroller is configured to operate using
14 power received from the host computer.
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- 16 9. The apparatus of claim 1, wherein the functionality of the filtering module is
17 exclusively provided by electrical hardware.
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- 19 10. The apparatus of claim 1, wherein the functionality of the filtering module is
20 provided by a combination of electrical hardware and computer software.
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- 22 11. The apparatus of claim 1, wherein the filtering module is located proximate to at least
23 one of the keyboard and the host computer.
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1 12. A method for filtering out selected key codes transmitted between a keyboard and a
2 host computer, the method comprising:

3 intercepting a stream of key codes transmitted between a keyboard and a host
4 computer;

5 blocking, independently from the keyboard and host computer, at least one of the
6 intercepted key codes; and

7 passing the unblocked key codes from the stream of key codes to the host
8 computer.

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10 13. The method of claim 12, wherein the key codes comprise make key codes
11 corresponding to keys that are pressed, and release key codes corresponding to keys that
12 are released, and wherein each key on the keyboard is characterized by a make key code
13 and a release key code.

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15 14. The method of claim 13, further comprising maintaining a rules table containing key
16 codes and rules associated with each key code, each rule determining whether a key code
17 is to be blocked or transmitted.

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19 15. The method of claim 14, further comprising:

20 maintaining a make list containing a list of make key codes that have been
21 received and transmitted to the host computer and for which corresponding release key
22 codes have not been received; and

23 maintaining a block list containing a list of make key codes that have been
24 received and blocked from the host computer and for which corresponding release key
25 codes have not been received.

1 16. The method of claim 12, wherein blocking further comprises blocking exclusively
2 with hardware.

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4 17. The method of claim 12, wherein blocking further comprises blocking with a
5 combination of hardware and software.

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7 18. The method of claim 12, further comprising reprogramming a memory device to alter
8 a set of at least one of the selected key codes, sequences of key codes, and combinations
9 of key codes.

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11 19. A system for filtering out selected key codes transmitted between a keyboard and a
12 host computer, the system comprising:

13 a keyboard;

14 a key code filter configured to receive a stream of key codes from the keyboard
15 and block at least one of selected key codes, sequences of key codes, and combinations
16 of key codes of the stream of key codes; and

17 a host computer configured to receive unblocked key codes from the key code
18 filter.

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20 20. The system of claim 19, wherein the key code filter is implemented independent of
21 the keyboard and the host computer.

- 1 21. An apparatus for filtering out selected key codes transmitted between a keyboard and
2 a host computer, the apparatus comprising:
3 a key code filter configured to intercept a stream of key codes transmitted between
4 a keyboard and a host computer; and
5 the key code filter further configured to block transmission of at least one of
6 selected key codes, sequences of key codes, and combinations of key codes of the stream
7 of key codes.
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9 22. A computer-readable medium for filtering out selected key codes transmitted
10 between a keyboard and a host computer, the computer-readable medium comprising
11 computer code configured to carry out a method comprising:
12 receiving and transmitting key codes to and from a keyboard and host computer;
13 and
14 blocking, independently from the keyboard and host computer, at least one of
15 selected key codes, sequences of key codes, and combinations of key codes.
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17 23. The computer-readable medium of claim 22, wherein the key codes comprise make
18 key codes corresponding to keys that are pressed, and release key codes corresponding to
19 keys that are released, wherein each key on the keyboard is characterized by a make key
20 code and a release key code.
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1 24. The computer-readable medium of claim 23, wherein the filter module further
2 comprises:

3 a rules table containing key codes and rules associated with each key code,
4 wherein each rule determines whether a key code is blocked or transmitted;
5 a make list containing a list of make key codes that have been received and
6 transmitted to the host computer and for which corresponding release key codes have not
7 been received by the filter module; and
8 a block list containing a list of make key codes that have been received and
9 blocked from the host computer and for which corresponding release key codes have not
10 been received by the filter module and wherein blocking one of selected key codes,
11 sequences of key codes, and combinations of key codes comprises consulting the block
12 list.

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14 25. An apparatus for filtering out selected key codes transmitted between a keyboard and
15 a host computer, the apparatus comprising:

16 a filtering module configured to receive a stream of key codes and block at least
17 one of selected key codes, sequences of key codes, and combinations of key codes, the
18 filtering module comprising:

19 a rules table containing key codes and rules associated with each key code,
20 each rule determining whether a key code is blocked or transmitted;

21 a make list containing a list of make key codes that have been received and
22 transmitted to the host computer and for which corresponding release key codes
23 have not been received; and

24 a block list containing a list of make key codes that have been received
25 and blocked from the host computer and for which corresponding release key
26 codes have not been received.

1 26. A user interface terminal, comprising:

2 An input device designed to enable a user to input instructions to the user
3 interface terminal;

4 A processing system designed to receive instructions from the input system,
5 process the instructions, and provide responses to the user; and

6 A filtering system operatively coupled between the input and processing systems,
7 the filtering system designed to receive all instructions from the input system, filter
8 out certain instructions, and forward all non-filtered instructions to the processing
9 system.
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11 27. The user interface terminal of claim 26, wherein the input device is
12 provided within a kiosk.
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14 28. The user interface terminal of claim 26, wherein the input device
15 comprises a touch screen.
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17 29. The user interface terminal of claim 26, wherein the input device
18 comprises a keyboard.
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20 30. The user interface terminal of claim 26, wherein the input device
21 comprises a voice recognition system.
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